(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 4 November 2004 (04.11.2004)

PCT

(10) International Publication Number WO 2004/095851 A3

- H04Q 1/20, (51) International Patent Classification⁷: H04B 1/00
- (21) International Application Number:

PCT/US2004/012539

- (22) International Filing Date: 23 April 2004 (23.04.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

60/464,823

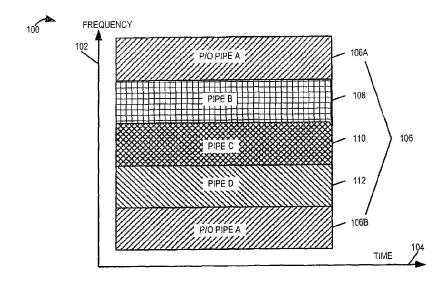
23 April 2003 (23.04.2003)

- (71) Applicant (for all designated States except US): FLAR-ION TECHNOLOGIES, INC. [US/US]; Bedminster One, 135 Route 202/206 South, Bedminster, NJ 07921 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LAROIA, Rajiv [IN/US]; 455 Somerville Road, Basking Ridge, NJ 07920 (US). SRINIVASAN, Murari [IN/US]; 75 Freemont Court, Somerset, NJ 08873 (US). LI, Junyi [CN/US]; 357 Wren Lane, Bedminster, NJ 07921 (US).

- (74) Agent: STRAUB, Michael, P.; Straub & Pokotylo, 620 Tinton Avenue, Building B, 2nd Floor, Tinton Falls, NJ 07724-3260 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, **7W**.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHODS AND APPARATUS OF ENHANCING PERFORMANCE IN WIRELESS COMMUNICATION SYSTEMS



(57) Abstract: Methods and apparatus for supporting and using multiple communication channels within the communication system. Mobiles (14, 16) maintain at least two sets of channel quality information at any one point in time. Mobiles (14, 16) select the better channel and communicate with base station (12) or allow the base station (12) to select channel better quality channels. Different mobiles in the same cell may support different technologies.





Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GII, GM, IIR, IIU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CII, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,

IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

with international search report

(88) Date of publication of the international search report: 24 February 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12539

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : H04Q 1/20, H04B 1/00			
US CL : 455/130, 101, 561, 64.4, 67.3, 67.1			
According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 455/130, 101, 561, 64.4, 67.3, 67.1; 370/235			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched EAST/WEST			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category		<u> </u>	
Α	US 2003/0190897 A1 (LEI et al) 09 October 2003, p	page 3 sections 0029-0030 1-38	
Α	US 2003/0086371 A1 (WALTON et al) 08 May 2003, page 1 sections 0010-0013		
Α	US 2003/0153273 A1 (EBERT et al) 14 August 2003	3, page 7 sections 0058-0065 1-38	
Fu	ther documents are listed in the continuation of Box C.	See patent family annex.	
* Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention			
of particular relevance "X" document of particular relevance; the claimed invention cannot be			
"E" carli date	er application or patent published on or after the international filing	considered novel or cannot be considered to involve an inventive step when the document is taken alone	
estal spec	nment which may throw doubts on priority claim(s) or which is cited to blish the publication date of another citation or other special reason (as ified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
	iment referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
prio	"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search Date of mailing of the international search report 13 Nevember 2004 (13.11.2004)			
12 November 2004 (12.11.2004) Name and mailing address of the ISA/US Authorized officer			
Mail Stop PCT, Aun: ISA/US Commissioner for Patents RO Box 1450		Naghmeh Mehrpour Celephone No. 703-308-5000	

Form PCT/ISA/210 (second sheet) (July 1998)